

There is, as in *N. meleagris*, &c., a foramen on the upper surface of the manubrium sterni. The posterior lateral processes are again intermediate; the neck uniting the two branches of the process to the body of the sternum is wider than in *Gallus*, but not so wide as in *Numida*. The depth of the keel is suggestive of *Numida*, but its form is more like that of *Gallus*. The mode of attachment of the ribs is like that of *Gallus*; but, as already explained, *Numida meleagris* alone of the genus *Numida* also agrees with *Gallus*.

In the scapula the hook-like process of the acromion is not quite so patent as it is in *Numida*.

The pelvis (fig. 6, p. 342) is on the whole like that of *Numida*. The prepubic processes are small, and the backward projection of the ilia but little marked; there is, however,—and this is a resemblance to *Gallus* (fig. 7, p. 343)—a considerable attachment between the pubis and the ischium.

In addition to the osteology of the hybrid, I have examined the syrinx. The syrinxes of both *Gallus* and *Numida* have been described and figured by Garrod in his well-known paper upon the trachea in the Gallinaceous birds*. I need not recapitulate his descriptions, as they are accessible to every one; I may state that the syrinx of the hybrid was quite intermediate in its characters. There was a complete bony bar below, uniting the extremities of the last rings before the bifurcation; but, as in *Gallus* and *not* as in *Numida*, there were no lateral gaps between the few last tracheal rings.

XXVII.—*Birds'-nesting in and around Lucknow.*—No. III. †

By WILLIAM JESSE.

AFTER AN UNSUCCESSFUL season in 1897, owing to illness, 1898 made amends to me for previous disappointments, inasmuch as I found the nests and took the eggs of some 26 species new to me. Many of these are of course really common, and, as they had been brought to me often before and have

* P. Z. S. 1879, p. 354.

† For previous papers on the same subject see *Ibis*, 1896, p. 185, and 1897, p. 554.

been recorded in my previous papers, there is no need to go into further details. Among them are the Shikra (*Astur badius*); Striated Bush-Babbler (*Argya caudata*); Indian White-eye (*Zosterops palpebrosa*); Tailor-bird (*Orthotomus sutorius*); Rufous Fantail-Warbler (*Cisticola cursitans*); Black-headed Myna (*Temenuchus pagodarum*); Brown Rock-Chat (*Cercomela fusca*); and the Indian Pied Kingfisher (*Ceryle varia*). Of certain other species, of which I had previously only a single egg or so, I managed to obtain one or more good clutches, as Pallas's Fishing-Eagle (*Haliaëtus leucoryphus*); the Magpie-Robin (*Copsychus saularis*); the Thick-billed Flowerpecker (*Piprisoma agile*); the Yellow-wattled Plover (*Sarciophorus bilobus*); and the Wire-tailed Swallow (*Hirundo smithii*).

I also discovered a breeding-place of the Whiskered Tern (*Hydrochelidon hybrida*); but, as I was prevented by fever from going out on the day I intended to take the eggs, I must leave the description of the colony for some future time.

All the eggs enumerated in this paper were taken in Oudh—nearly all within 10 miles of the city of Lucknow; but besides this I spent a few days at Fatchgarh, on the Ganges—where that river forms the boundary between the North-west Provinces and Oudh—in order that I might procure eggs of the Terns and Plovers. An account of this trip has already appeared in 'The Ibis' (above, p. 4).

Of course I cannot lay claim to have found out much that was previously unknown: a limited area of an already well-worked district does not leave much scope; still I think there are a few facts of interest which have not been previously recorded. In the first place, I have taken with my own hands authentic eggs of the Brahminy Kite (*Haliastur indus*), a bird which usually keeps to the moister districts of Bengal and the Terai, and of the Black-headed Cuckoo-Shrike (*Campophaga sykesi*), which species I do not think has been previously recorded from these parts. I have also found that the Yellow-wattled Plover (*Sarciophorus bilobus*) breeds later in the year than is commonly supposed, having taken eggs this year on June 3rd and July 17th.

Among the various species which I found breeding this year, besides those mentioned, the eggs of the following have not been previously recorded from the Lucknow District itself:—Indian Pipit (*Anthus rufulus*); Crested Lark (*Galerita cristata*); Bronze-winged Jacana (*Metopidius indicus*); and Blue Heron (*Ardea cinerea*).

Of course I do not pretend for a moment that there is anything out of the way in taking the eggs of these birds; only, as I cannot find any note to the effect that others have met with them in this particular district, I think it worth while to mention it.

Having thus prefaced my remarks, I will give some notes on the more interesting species, eggs of which I have taken during the past twelve months.

HALIASTUR INDUS. Brahmīny Kite.

Hind. [*Lucknow*]: Maochli-Khata.

Though this bird was known to breed in the "Division," I could find no authentic record of its nest being taken here. Reid, in 'Stray Feathers,' says that he had had the eggs brought him in March, but does not give any further particulars. I was therefore much interested when I received information which led me on April 16th to a nest that had been found. It was situated about three-quarters way up a mango-tree. One bird was seated on it, the other standing by its side. The nest contained one chick and one stale egg, which was brought down in triumph. All the time that I was near the old birds flew round in evident agitation, quite close to my head; but I did not shoot them, as I was leaving the young one, and, moreover, the maroon-coloured body with white head and shoulders cannot be mistaken. The nest was a small platform of sticks, lined with mud, with which the egg, originally an unspotted greyish white, was covered.

DENDROCITTA RUFA. Indian Tree-pie.

Hind. [*Lucknow*]: Mootri.

This very common bird lays eggs, as many of the *Passerine* birds do, of two distinct types: (a) pink or white

ground with reddish-brown and russet spots ; (b) greenish ground with greenish and yellowish-brown markings ; but on April 4th I took three eggs from a tree in my own compound which were of a pale yellowish green, *absolutely unspotted*. I had continually watched the bird on this nest for some days and had seen her fly off when the eggs were taken, or I should have had my doubts as to their parentage. This clutch has now given me a regular series, showing all the various shades of colour and markings that the eggs of this Tree-pie possess.

PYCTORHIS SINENSIS. Yellow-eyed Babbler.

On July 29th Mr. Sutton Davies, of the East Lancashire Regiment, and I found five hard-set eggs of this bird.

As I did not think that these eggs had been previously recorded from Lucknow, I was very anxious to get the bird, but though we waited till it was dark, and continually caught glimpses of her, we could never get a shot in the dense jungle. I do not think, however, that there can be any reasonable doubt as to the parentage of these eggs, as, apart from the short glimpses which we caught of the bird, there is, to my knowledge, no other species in this part of India to which the nest and eggs could have belonged. The former was a deep inverted cone lined inside with grass and plastered outside with spiders' webs, and the whole structure was firmly fastened to the long stalk of patowal grass. The eggs were most lovely, being of a pinkish-white ground thickly blotched with various shades of blood-red and carmine.

COPSYCHUS SAULARIS. Magpie-Robin.

Hind. [Lucknow] : Dayat.

This bird, which about here generally breeds in June and July, usually lays four, sometimes five eggs, but on June 16th I found a hen bird sitting on a pile of no fewer than nine eggs. These were placed in the usual nest in a hole of a gula-tree some 20 feet from the ground, and while some were fresh, others were stale, two slightly set, and one almost dried up. Possibly they were the product of two hens ; but, though I waited, I saw only one pair of birds.

ÆGITHINA TIPHIA. Common Iora.

This species is much more often heard than seen, and is, consequently, frequently overlooked. Its nest is extremely difficult to find, and the only one that I have so far discovered was in a small fork of a mango-tree on June 17th. We had been watching the birds for some time, being attracted by their note, when suddenly the hen bird came down and deliberately sat on the eggs within about 10 feet of us. The nest was a deep cup, something like that of *Rhipidura albifrontata*, but not quite so neat. It contained two eggs of a delicate pinkish white, marked with long brown and violet-grey streaks and blotches. I left the birds alone in the hope of getting more eggs; but, although I often saw them afterwards, they did not apparently breed again.

GRAUCALUS MACEI. Large Cuckoo-Shrike.

Though two years ago I found this bird's nest, I had never got the eggs. The bird itself is almost common, but the nest is one of the most difficult to find, being most carefully concealed, and the owners exceedingly shy. However, on June 12th, while walking along one of the principal roads in Lucknow, a Cuckoo-Shrike flew off a nest in the fork of a sheshum-tree, containing two fresh eggs. They were a most handsome pair, very glossy, of a rich olive, thickly marked and blotched with various shades of brown. A similar egg, said to belong to this species, was brought me on March 21st.

CAMPOPHAGA SYKESI. Black-headed Cuckoo-Shrike.

I can find no previous record of this bird having been observed in Lucknow, and was therefore much interested in finding on June 10th a nest and two fresh eggs and shooting one of the parents. The nest was a very shallow pad, like that of *Graucalus macei*, so shallow that the eggs were unfortunately shaken out in climbing the tree and broken; but a third, previously taken from the same nest, was given me. This egg, and the fragments of the two others, were of a rich deep green thickly blotched with brown. The bird is

excessively shy, but its beautiful note once heard betrays it, and, though it is not common, I met with more pairs than one. Moreover, two boys brought me eggs which, both from their appearance and from their descriptions of the bird and nest, were evidently of this species.

RHIPHIDURA ALBIFRONTATA. White-eyebrowed Fantail Flycatcher.

Though this is a common bird in the mango-topes near Lucknow, its nest is hard to find, unless you are well acquainted with its habits. As I had never got its eggs, I determined to give up some time purposely to this object and was successful in discovering the following nests:—

June 11. Three nests (nearly finished), two on mango-trees, the third on a guava.

„ 17. Took 3 and 2 eggs respectively from the first two nests; the third had been broken down by a storm. Found another nest with three young ones.

„ 25. Two eggs from a nest high up on a mango-tree, and found another nearly ready.

All the nests were most delicate little cups, firmly fixed on to horizontal branches, the outside carefully covered over with cobwebs. The eggs were a yellowish white with a ring of brown and yellow spots, and much resembled miniature Shrikes' eggs.

ANTHUS RUFULUS. Indian Pipit.

I shot a male bird off three fresh eggs on March 31st. The nest was a neat little cup, placed in the centre of a tuft of patowal grass. The female laid a fourth egg next day in the hollow left after taking the nest, a structure so loosely put together that it fell to pieces almost immediately it was taken.

MIRAFRA ERYTHROPTERA. Red-winged Bush-Lark.

In 1896 I found a nest, which, after comparison with Hume's notes, I came to the conclusion must belong to *M. cantillans*. Since then I have shot and watched several of these Bush-Larks, and they have all proved to be *M. erythro-*

ptera; in fact, if *M. cantillans* occurs in the district, it can only be very local. This year I flushed undoubted *M. erythroptera* off two nests, April 1st (2 fresh eggs), April 5th (2 hard-set eggs), and various other nests were found by the boys. All the nests were on the ground, well concealed by grass, and domed; except in one instance, they contained two eggs only.

GALERITA CRISTATA. Crested Lark.

On March 30th I took three fresh eggs from a nest carefully concealed under a tuft of patowal grass. We had great difficulty in finding the nest, which was a deep cup of fine dry grass, so loosely put together that it fell to pieces on removal. I shot one of the birds as it rose from the nest. The eggs before being emptied were of a faint pinkish, speckled and stippled all over with light brown.

ARACHNECTHRA ASIATICA. Purple Sun-bird.

It is probable that the normal complement of eggs of this bird does not exceed two, but on March 31st a clutch of three fresh eggs was brought me; on April 5th I took another containing the same number with my own hand; and on April 15th two more similar clutches were brought. The nest that I found had evidently not been tampered with, and the schoolboys who brought me the others had had no inducement to make them untruthful.

METOPIDIUS INDICUS. Bronze-winged Jacana.

On July 24th I shot both birds from a nest containing three fresh eggs. The nest, which was merely a slight pad formed by tearing up the weeds, was in about 5 feet of water and was so slight that the eggs themselves were half under water. Though Davies and I hunted carefully, we could not find any more nests. In fact, the majority of this species leave this part of the country after the cold weather, and breed, I fancy, in the moister districts of Bengal.

HYDROPHASIANUS CHIRURGUS. Pheasant-tailed Jacana.

I have taken the eggs of this bird in previous years, but among the many I have seen I have never met with

spotted eggs. On July 30th, however, Davies and I took a nest on a big jheel containing three fresh eggs of a dullish yellow-green, faintly but distinctly stippled and speckled with dull light brown. Only two of the eggs were thus marked, the other being practically normal. I am curious to know whether any one else has come across eggs of this genus marked in any way. The eggs of this bird frequently perish from lying so much in water, in spite of the great gloss, which one would think would protect them.

ARDEA CINEREA. Common Heron.

Hind. [*Lucknow*]: Chanak.

On July 17th, in a perfect deluge of rain, I got two nests containing 4 (set) and 2 (fresh) eggs respectively. The nests were in a high pipal-tree, and beside them a pair of the Large White Egrets (*A. alba*) had a nest; but, owing to the rain, we could not get the men to climb the slippery branch on which it was placed.

NETTAPUS COROMANDELIANUS. Cotton-Teal.

Hind. [*Lucknow*]: Ghirria.

On July 30th Davies and I found a nest containing four broken and two whole fresh eggs. The two birds kept flying to and fro, uttering their cry of "Fix bayonets!" and it was by the female going to look at her treasures that I found them. The nest was a collection of bents and grass at the bottom of a great hole in a pipal-tree, just a little deeper than my arm could reach, and about 15 feet from the ground.

XXVIII.—*On some Remains of Birds from the Lake-dwellings of Glastonbury, Somersetshire.* By C. W. ANDREWS, B.Sc., F.Z.S.

IN 1892 Mr. Arthur Bulleid of Glastonbury discovered in the neighbourhood of that town the remains of an ancient lake-village, at that time only recognizable as a series of nearly obliterated mounds marking the sites of the houses.